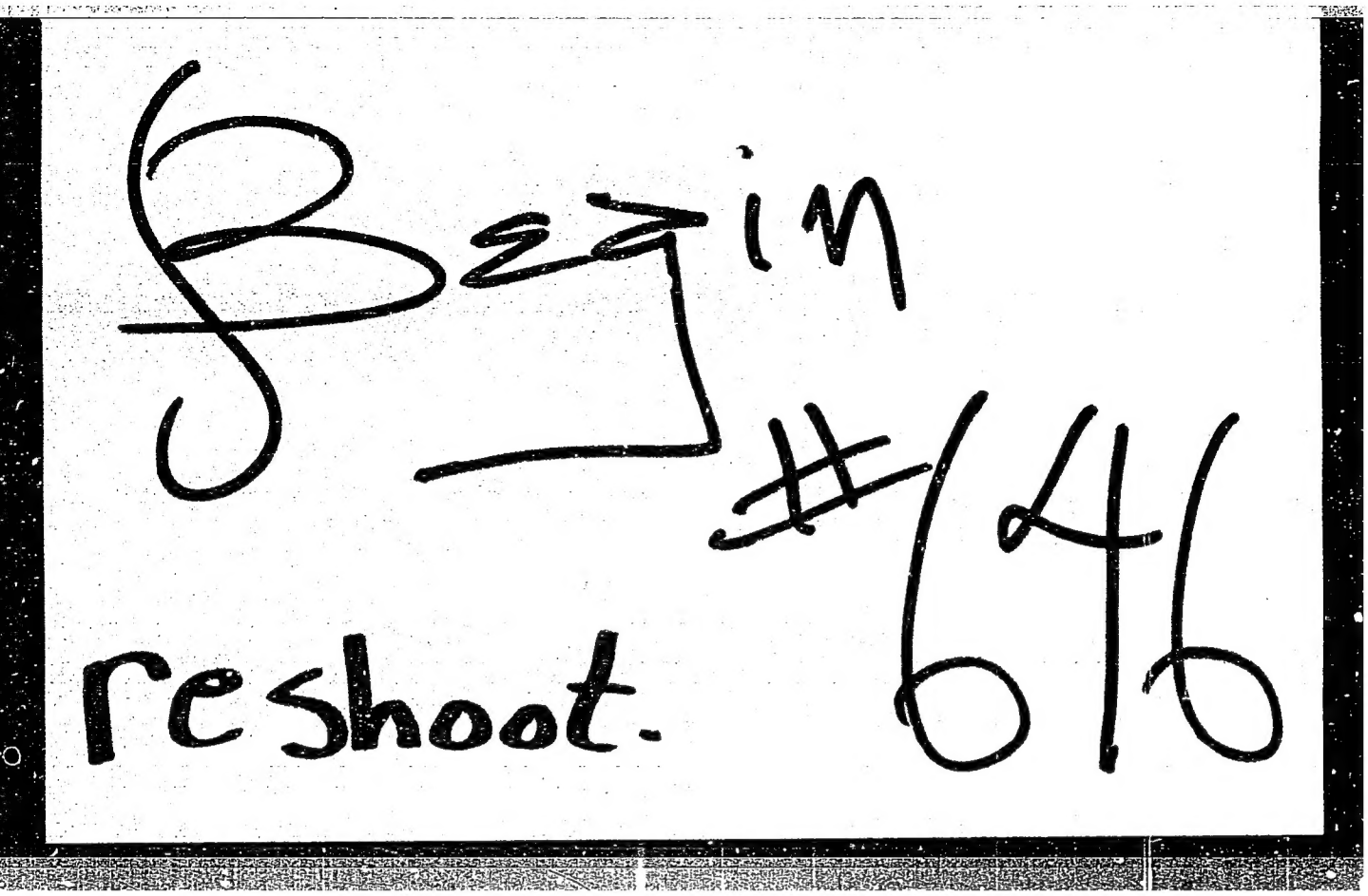


VAYSER, A.

News from economic councils. Stroitel' no.9:31 S '59. (MIRA 13:3)
(Building machinery)

VAYSER, I. V.

"An Experimental and Theoretical Investigation of the Pneumatic Regulator 04-DP." Cand Tech Sci, Inst of Automatics and Tele-mechanics, Acad Sci USSR, 16 Dec 54. (VM,6 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

USSR/Automatics and telemechanics-pneumatic regulator FD-2757

Card 1/2 Pub. 10 - 2/11

Author : Abdullayev, A. A.; Vayser, I. V.; Nadzhafov, E. M. (Moscow)

Title : Equations of the pneumatic regulator 04

Periodical : Avtom. i telem., 16, Sep-Oct 1955, 431-453

Abstract : The authors derive the equations to pneumatic regulators of the type 04 (factory "Tizpribor"). Inspite of the fact that these regulators are issued serially (tens of thousands of them in the course of several years) and have been utilized in various branches of the national economy, the designing and computations of systems equipped with regulators of this kind have been made difficult, the authors note, by the fact that up til now equations have not been derived that describe the processes in the regulator and numerical values of the parameters entering these equations have not been determined. They conclude that the derived equations of type 04 regulator and numerical values of their coefficients corresponding to various static regimes permit one knowing the remaining elements of the regulation system (object, final-control mechanism, sensitive element) to write down in numerical form the equations of motion according to final formulas and graphs immediately.

FD-2757

Card 2/2

One reference: V. L. Lossiyevskiy, Osnovy avtomaticheskogo regulirovaniya tekhnologicheskikh protsessov [Principles of the automatic regulation of technological processes], Defense Press, 1950.

Institution : -

Submitted : July 14, 1954

USSR/Automatics and telemechanics-stability concept FD-2762

Card 1/3 Pub. 10 - 7/11

Author : Vayser, I. V. (Moscow)

Title : Remarks on the utilization of the concept of "degree of stability" for the evaluation of regulation process

Periodical : Avtom. i telem., 16, Sep-Oct 1955, 481-482

Abstract : In many industrial regulators of universal designs there exists the possibility of varying the isodrome time constant T_i all the way up to complete isodrome disconnection ($T_i=\infty$) so that it is possible by a smooth turning of the tuning organ to make a gradual transition from a regulator with rigid feedback to an isodrome regulator (e.g. regulator 04 of the factory "Tizpribor"). If the technical conditions on the regulation process admit a static error and if therefore decrease (all the way to zero) of this error is unessential from the viewpoint of engineering requirements, then evaluation of the process in accordance with the degree of stability can lead to erroneous conclusions. This is connected with the fact that the degree of stability indirectly determines the full time of the process to occur, but from the viewpoint of engineering requirements in the above indicated cases only essential is course of the process in regulation time tau and the further course of the process is completely unessential, which is connected only with the decrease of already acceptable static error. The author

considers a regulation system consisting of a one-contour circuit part of which is shunted by a negative isodrome feedback (Figure 1 in the original). He writes the characteristic equation of this system, in which he notes that in a transition from isodrome to rigid feedback ($T_1=\infty$) the second term is converted to zero and the equation possesses one zero root. The author draws (Figure 2) the planes of roots and the corresponding transient processes for systems with rigid feedback (case a) and with isodrome feedback for T_1 sufficiently large (case b). He assumes that in the case of rigid feedback the transient process satisfies the engineering requirements and is characterized by the degree of stability delta δ_1, and that under such conditions as little as desired the isodrome is connected. Here the transient process in the time interval tau varies as little as desired, and the order of the characteristic equation is increased by unity and one real root appears as close to zero as desired. From what has been said it follows that two processes occurring practically identically in the interval of regulation time tau and satisfying in equal measure the engineering requirements are characterized in the first case by a certain finite quantity delta δ_1 and in the second case by a quantity delta δ_2, which is considerably smaller than σ_1 and close to zero. Consequently in the evaluation of the processes according to the degree of stability in the above indicated cases of connection isodrome feedback it is necessary to take the

FD-2762

Card 3/3

distance from the imaginary axis not up to closest root but up to the second in magnitude from the left, namely as the degree of stability. One reference: Ya. Z. Tsypkin, P. V. Bromberg, "Degree of stability of linear systems," IAN SSSR, OTN, No 12, 1945.

Institution : -

Submitted : Mar 3, 1955

S/182/63/000/002/003/007
A004/A126

AUTHORS: Vaysburd, R. A., Tarnovskiy, I. Ya., Teterin, G. P.

TITLE: On the use of high-speed computers in developing die-forging technology

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 2, 1963, 10 - 13

TEXT: The authors are of the opinion that for solving the problems connected with the design particulars of a given component, e.g. dimensions, material, surface finish etc., high-speed computers can be used. Besides increasing the productivity, they would eliminate any subjective solution of technological problems. Since the most simple and widespread group of forgings are axially symmetric ones, i.e., forgings of the body-of-revolution type, this type of forgings would be the first whose technology could be developed by means of high-speed computers. The authors give a detailed description of a universal program which is being developed at present by a team of scientists of the Section "Metal Working" of the Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (Ural Polytechnic Institute im. S. M. Kirov), and the Laboratory of Forg-

Card 1/2

On the use of high-speed computers in...

ings of NIPIGORMASh in cooperation with technologists of Uralmashzavod. They enumerate the data to be programmed, the technological details to be determined, present formulae for determining the subprograms of calculating the forging volume, fixing the overlap and determining the forging draft. The results of the investigations carried out prove the practicability of using successfully high-speed electronic computers for working out the technological processes of die forging. There are 5 figures.

Card 2/2

VAYSBURD, R.A.; TARNOVSKIY, I.Ya.; TETERIN, G.P.

Use of rapid computers for the development of forging. Kuz.-shtam.proizv. 5 no.2:10-13 F '63. (MIRA 16:2)
(Forging) (Electronic computers)

SOV/163-58-2-33/46

AUTHORS: Tarnovskiy, I. Ya., Ganago, O. A., Vaysburd, R. A.

TITLE: Theoretical Investigations in Open and Closed Dies for Annular Swage Blocks (Teoreticheskoye issledovaniye shtampovki pokovok kol'tsevoy formy v otkrytykh i zakrytykh shtampakh)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 2, pp. 184 - 191 (USSR)

ABSTRACT: The stages of annular swage blocks in open and closed dies were investigated. In punching in open dies the filling in of the metal into the cavities of the dies as well as the flow of the metal are determined by the position of the critical surface. In stamping in closed dies an unequal flow of the metal in the open zone is observed. This influence is explained by the different direction of the internal friction forces in those zones. The rules governing the flow of the metals in various stages of the stamping of annular swage blocks were determined. A simple formula for any moment of the depression, in the second stage of stamping was found (7). By knowing the position of the

Card 1/2

Theoretical Investigations in Open and Closed Dies for Annular Swage Blocks

SOV/163-58-2-33/46

critical surface for any moment of the depression in the second stage of stamping the height of the metal in cavity may be calculated at any single moment. Taking into account the rules governing the flow of the metal in the various cavities as well as the velocity factors in stamping an efficient construction of the dies may be reached. There are 5 figures and 2 references, 2 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute)

SUBMITTED: October 5, 1957

Card 2/2

TARNOVSKIY, I.Ya.; GANAGO, O.A.; VAYSBURD, R.A.

Deformations and forces in closed piercing. Izv.vys.ucheb.zav.; chern.met. no.4:99-108 '60. (MIRA 13:4)
(Rolling (Metalwork)) (Deformations(Mechanics))

TARNOVSKIY, I.Ya.; GANAGO, O.A.; VAYSBURD, R.A.

Investigating metal flow during upsetting with backing rings by means of the variations method. Izv.vys.ucheb.zav.; chern. met. no.5:55-60 '60. (MIRA 13:6)

1. Ural'skiy politekhnicheskiy institut.
(Forging) (Deformations (Mechanics))

TARNOVSKIY, I.Ya., prof., doktor tekhn.nauk; GANAGO, O.A., dots.;
VAYSBURD, R.A., inzh.

Investigating deformations and forces in forging on ring pads.
Izv.vys.ucheb.zav.; chern.met. 2 no.8:55-67 Ag '59.
(MIRA 13:4)

1. Ural'skiy politekhnicheskiy institut. Rekomendovano kafedroy obrabotki metallov davleniyem Ural'skogo politekhnicheskogo instituta.
(Deformations(Mechanics)) (Forging)

SOV/163-59-1-24/36

18(5)

AUTHORS: Tarnovskiy, I. Ya., Garago, O. A., Vaysburd, L. A.

TITLE: Determination of the Forces in Swage Forging of Axially Symmetrical Forgings (Opredeleniye usiliy pri shtampovke osesimmetrichnykh pokovok)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 1, pp 126 - 132 (USSR)

ABSTRACT: In the articles cited by references 1,2,3,4,and 5 the statement is found that in any kind of drop forging a certain amount of surplus metal is pressed from the swage into the fin groove, after the swage has been completely filled. This stage, termed "pre-forging" stage, of the forging process is distinguished by requiring the maximum forging force which must be determined in order to ascertain the required press or hammer weight. It has been found that in the pre-forging stage not the total metal volume contained in the swage is subjected to deformation, but only that part of the volume being near the swage surface. If ways and means would be found of determining the actual deformation zone in the pre-

Card 1/4

forging stage a determination of the force required could be achieved with a sufficient accuracy. There is no necessity of taking into account the complicated shape of the swage and thus the number of variables is reduced. Only the diameter of the swage at the inside perimeter of the fin groove, the dimensions of this groove and the ratio between the fin thickness and the dimensions of the actual deformation zone of the forging in the pre-forging stage must be taken into account. The accuracy in solving this problem depends upon the accuracy with which the boundaries of the actual deformation zone of the metal in the swage can be determined and upon the simplifying restrictions placed upon some of the formulas. Various methods of determining these boundaries are found in publications (Refs 1,2,3,4,5). In this article the shape of the deformation zone is for the sake of simplicity assumed to be conical. For the purpose of determining the actual plastic deformation in the pre-forging stage the law of the minimum of total deformation energy was applied. This allows a theoretical deformation of the boundaries of the deformation

zone. This problem was solved by applying the Ritz variation method. Its application to the upsetting deformation of metals has been described in earlier articles (Refs 6,7). Comprehensive experimental information was used in establishing formula (1) which describes the curve expressing the actual propagation of the deformation zone in drop forging. This formula only describes the shape of the boundary between the rigid and the plastic zone of the forging. The volume of the deformation zone depends upon the varying parameter a_1 which is determined by the law of the minimum of the total deformation work and is specified by formula (13). a_1 determines the propagation of the zone of plastic deformation. Formula (15) for

$\frac{p}{\sigma_s}$ is obtained, where p denotes the average specific pressure and σ_s the yield point at given temperatures and velocities. The experimental checking of formula (15) yielded satisfactory

results. Formula (13) on simplification gives formula (14) and formula (15) on simplification gives formula (16). These formulas can, however, only be used if the height of the deformation zone does not exceed the depth of the swage and if the temperature both of the forging and of the fin are equal. There are 4 figures and 8 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural'skiy Polytechnical Institute)

SUBMITTED: April 7, 1958

S/149/62/000/005/008/008
A006/A101

AUTHORS: Pozdeyev, A. A., Tarnovskiy, I. Ya., Vaysburd, R. A., Orlov, S. N.

TITLE: On the calculation of force in pressing aluminum alloy rods

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 5, 1962, 145 - 155

TEXT: In order to develop methods of determining the force in pressure working of metals, the authors attempted the derivation of a formula to calculate the force in rod pressing, using direct methods of variation calculus. Force and pressure are calculated with the use of a rough, approximate metal flow diagram (Fig 1) where the container is divided into 3 sections, the velocity field is kinematically possible, and value "a" is the depth of deformation spread. The following simplified formula for the necessary force in pressing rods is derived:

$$\frac{p_c}{2\tau_s} = 1.1 + 1.15 \lg\lambda + 2\sqrt{\frac{0.4\lambda + 0.6}{\sqrt{\lambda}} - 1} + 2.8\frac{L}{D}; \qquad (6)$$

λ is the extrusion. The calculated data were experimentally checked and their

On the calculation of force in...

satisfactory agreement makes it possible to recommend the relation obtained for the determination of the pressing force for aluminum alloys. Calculations with the use of formula (6) are simple and do not yield indefinite results as e.g. Gubkin's formulae. Graphs are plotted to facilitate calculation (Figure 7). There are 2 tables and 7 figures.

ASSOCIATIONS: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)
Kafedra obrabotki metallov davleniyem (Department of Pressure Working of Metals)

SUBMITTED: April 9, 1962

On the calculation of force in...

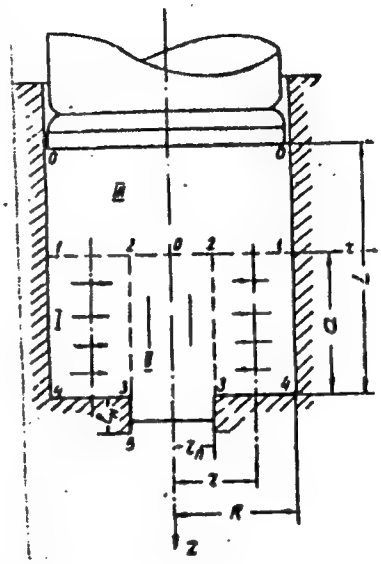


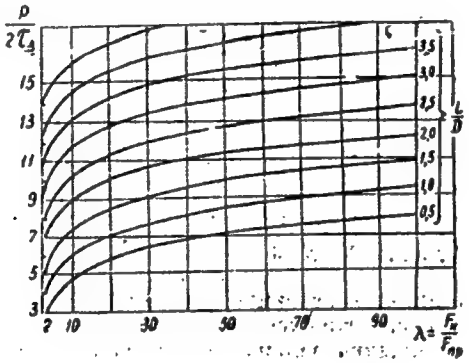
Figure 1. Kinematic diagram of metal flow and shear volumes in pressing rods from a round container

Legend: r_n is the rod radius; R is the container radius; L is the length of the pressed ingot; l_m is the length of the operational zone of the die; a is the depth of deformation seat spread (variable parameter)

Card 3/4

On the calculation of force in...

Figure 7. Graph of function $\frac{p}{2\tau_s} = f\left(\lambda; \frac{L}{D}\right)$ for K = 1.4
(K is $\frac{\tau'_s}{\tau_s}$; τ_s is friction stress; τ'_s is the shear yield point)



Card 4/4

2705T

S/148/61/000/002/004/011
A161/A133

1.1310

AUTHORS: Tarnovskiy, I. Ya., Ganago, O. A. Vaysburd, R. A.

TITLE: Calculating the forces in drop and forging

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 2 1961, 51 - 61

TEXT: The rated pressing stress of presses has to be selected for the expected maximum pressure required, i.e., finish forging when the surplus metal of the blank is forced out into the flash. The high number of existing theoretical and empirical formulae show that the problem is both important and difficult to solve. Usually the zone of plastic deformation at the flash space is determined experimentally and the data are used for calculations. The authors consider this practice wrong since the results are correct for the definite experiment conditions only, and use a different approach. The article presents a mathematical analysis in which the spreading of the plastic deformation zone at the flash space is determined theoretically for the minimum (instead of the maximum) full deformation energy. This principle itself had been treated in three previous works [Ref. 8: I. Ya. Tarnovskiy, A. A. Pozdeyev, V. B. Lyashkov. Deformatsiya metalla pro pro-

Card 1/4

Calculating the forces in drop and forging

katke (Metal deformation in rolling), Metallurgizdat, 1956; Ref. 9: I. Ya. Tarnovskiy, O. A. Ganago, R. A. Vaysburd. "Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, no. 1; Ref. 10: I. Ya. Tarnovskiy, A. A. Pozdeyev. "Nauchn. dokl. v. shk. Metallurgiya", 1958, no. 1]. Numerous experiments had been conducted with coordinate networks traced in different portions of specimens and deformations studied with tool microscope, and the same means were used later for verifying the theoretical conclusions. A formula describing the real spread of the plastic deformation into the die cavity has been derived (see Figure 1, a):

$$h_n = h_3 + a_1 h_3 \left(1 - \frac{x^2}{B_n^2}\right), \qquad (1)$$

where h - current ordinate (or height) of expanding seat of plastic deformation; a_1 - indeterminate (variable) parameter. The formula (1) determines only the shape of the boundary between the rigid (1) and the plastic (2) zone in the forgings, but the volume of the plastic deformation zone depends on the variable parameter (a_1). This parameter is determined by the following analysis. An electronic computer had been used for more accurate calculations. The Simpson rule and the Siebel formula (the latter for the determination of specific contact friction) are employed in the derivation of the final two simple formulas (12) and (13) for the

Calculating the forces in drop and forging

case of flat and of axially symmetric forgings:

$$\frac{p}{1.15\sigma_s} = 1 + 0.25\frac{B}{H_3}, \qquad (12)$$

where B = 2b is the width of the forging with the flash bridge; $H_3 = 2h_3$ - the flash thickness:

$$\frac{p}{\sigma_s} = 1 + 0.17\frac{D}{H_3}, \qquad (13)$$

where D is the forging diameter with the flash bridge. The formula (12) corresponds the formula obtained by Unksov [Ref. 12: Plasticheskaya deformatsiya pri kovke i shtampovke (Plastic Deformation in Forging and Stamping), Mashgiz, 1939] for the calculation of the stresses during upsetting between two parallel plates, and the formula is known as the Siebel formula derived for the case of upsetting of cylinders. This coincidence of the formulae leads to an important conclusion - that the value of the force required for finish forging depends not on the configuration of the forging in the vertical cross section, but on the shape and dimensions of the forging in the plane, the flash thickness, and the temperature and speed of

Card 3/4

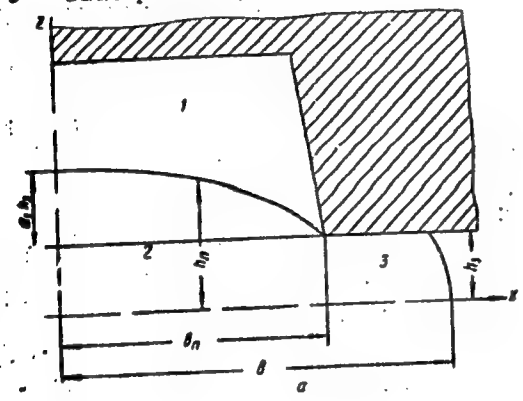
27037
S/148/61/000/002/004/011
A161/A133

Calculating the forces in drop and forging

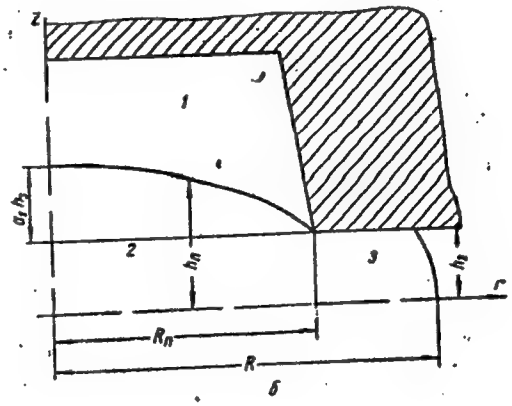
stamping. Experiments conducted with lead forgings gave results confirming this conclusion. There are 5 figures, 3 tables and 13 Soviet-bloc references.

Figure 1:

a - flat problem;



b - axially symmetric problem.



Card 4/4

TARNOVSKIY, Iosif Yakovlevich; POZDEYEV, Aleksandr Aleksandrovich; GANAGO, Oleg Aleksandrovich; KOLMOGOROV, Vadim Leonidovich; TRUBIN, Valeriy Nikolayevich; VAYSBURD, Rual'd Arkad'yevich; TARNOVSKIY, Valeriy Iosifovich; GOROBINCHENKO, V.M., red. izd-va; BEKKER, O.G., tekhn. red.

[Theory of working metals by pressure; variational methods of calculating forces and deformations] Teoriia obrabotki metallov davleniem; variatsionnye metody rascheta usilii i deformatsii. [By] I.IA.Tarnovskii i dr. Moskva, Metallurgizdat, 1963. 672 p. (MIRA 17:1)

VAYSBURG, R.S.

Control of ichthyophthiriasis on the Alma-Ata fishfarm. Trudy Inst. zool. AN Kazakh. SSR 19:249 '63. (MIRA 16:9)
(Alma-Ata--Protozoa, Pathogenic)
(Alma-Ata--Parasites--Fishes)

VAYSBURD, S.I., inzh. (g. Lugansk)

Experimental automatization of the exchange of mine cars on the surface of No.1 "XIX Parts"ezd" Mine of the Leninugol' Trust.. Ugol' 35 no.1:16-18 Ja '60. (MIRA 13:5)
(Automatic control)
(Lugansk Province--Mine railroads--Cars)

VAYSBURD, S.Ye.; KHEYFETS, V.L.

Electrochemical study of the interaction between metallic iron and slag (displacement of nickel from slags by the iron). Izv.vys.ucheb.zav.; tsvet.met. 2 no.6:76-84 '59. (MIRA 13:4)

1. Institut "Gipronikel'"

(Electrochemistry) (Slag--Analysis) (Ion exchange)

VAYSBURD, S. Ye. Cand Chem Sci -- "Study of the thermodynamic properties of iron-containing silicate ~~fusions~~ melts by the electrochemical method." Len, 1959. 11 pp (Min of Higher and Secondary Specialized Education RSFSR. Len Order of Labor Red Banner Technological Inst im Lensovet), 200 copies (KL, 49-59, 138)

VAYSBURD S. Ye

~~BOGDANOVSKIY, G. A.~~

5(4) PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.
Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodepositon and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Smirnov, M.V., and L.D. Yushina (Ural'skiy filial AN SSSR-Ural Branch, Academy of Sciences, USSR). Cathodic Processes During the Precipitation of Thorium From Fused Electrolytes 348

Gul'din, I.T., and A.V. Buzhinskaya (Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh metallov-State Scientific Research Institute of Nonferrous Metals). Mechanism of the Reduction of Galena From Suspensions in Fused Mixtures of Magnesium and Sodium Chlorides at a Liquid-Lead Cathode 352

Panchenko, I.D. (Institut obshchey i neorganicheskoy khimii AN USSR-Institute of General and Inorganic Chemistry, Academy of Sciences, UkrSSR). Equation for a Polarographic Wave at Solid Electrodes in Fused Salts 355

Chovnyk, N.G. (Aviatsionnyy institut Kuybyshev-Aviation Institute, Kuybyshev). Some Problems of the Polarography of Fused Electrolytes 358

Vaysburd, S. Ye., and V.L. Kheyfets (Gosudarstvennyy institut

po proyektirovaniyu predpriyatiy nikelevoy promyshlennosti-State Institute for the Planning of Enterprises of the Nickel Industry). Decomposition Voltage and Properties of Slags Used in Nonferrous Metallurgy 362

Discussion [V.P. Mashovets and contributing authors] 365

PART V. THE ELECTRODEPOSITION OF METALS 369

Kaishev, R., [illegible] (Physical Institute of the Bulgarian Academy of Sciences). Spiral Growth and Overvoltage During the Electrocrystallization of Silver 371

Bockris, J. O'M., U. Mil, and B.E. Conway (U.S.A.). Determination of Faraday Impedance at Solid Electrodes and Phases Which Determine Rate During the Electrodeposition of Copper 380

Vargramyan, A.T. Nonhomogeneity of an Electrode Surface and

the Mechanism of the Electrodeposition of Metals 395

Polukarov, Yu. M., and K.M. Gorbunova (Institute of Physical Chemistry, Academy of Sciences, USSR). Some Theoretical Problems on the Electrocrystallization of Alloys 40-

5.4130,5.1310,5.4600

75655
SOV/80-32-10-4/51

AUTHORS: Vaysburd, S. Ye., Kheyfets, V. L.

TITLE: Concerning the State of Cuprous Sulfide in Iron-Bearing Molten Silicates

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp 2153-2157 (USSR)

ABSTRACT: This is a study of the above silicates with addition of iron and copper sulfides. Samples: silicate melts of the $CaO-FeO-SiO_2$ type containing some MgO and Fe_2O_3, and a multicomponent slag of shaft furnace smelting. Test conditions: MgO crucibles; nitrogen atmosphere; 1,250 ± 5°. After measurement of the decomposition voltage E, quenching, and removal of sulfide and metal inclusions, the silicates were analyzed chemically; the slag ionic composition and decomposition voltage $E^{0'}$ were calculated, taking into account the trivalent iron content. The presence of S introduced as FeS did not affect the anode potential since anode polarization

Card 1/3

was insignificant, and highly concentrated iron was first to be oxidized at the anode. The presence of Cu_2O caused a sharp drop in decomposition voltage; this indicates that, owing to dissociation to Cu^+ ions, metal (alloy) cathode plating started at a cathode potential higher with respect to a comparable slag containing no Cu. On the other hand, since addition of CuS_2 did not affect the cathode potential, CuS_2 remained undissociated. FeS and CuS_2 concentrations on par with the S and Cu content of industrial slags have no effect on the decomposition voltage and hence on iron activity (γ); knowledge of slag component-oxide content will, regardless of sulfur content, suffice for the industrial application of E and γ. There is 1 table; 1 figure; and 8 references, 6 Soviet, 1 British, 1 German. The British reference is: Bockris, J., Kitchener, G., Ignatowicz, S., Fomlinson, J., Faraday Soc, 48, 75 (1952).

Concerning the State of Cuprous Sulfide in Iron-Bearing Molten Silicates

75655
SOV/80-32-10-4/51

ASSOCIATION: Planning and Scientific Research Institute of the State Institute for the Design and Planning of the Nickel Industry (Proyektnyy i nauchno-issledovatel'skiy institut gipronikel')

SUBMITTED: September 30, 1958

Card 3/3

S/080/63/036/001/023/026
D204/D307

AUTHORS: Remen', T.F., Kheyfets, V.L., and Vaysburd, S.Ye.

TITLE: The activity of sulfur in binary systems Fe-S, Co-S, and Ni-S

PERIODICAL: Zhurnal prikladnoy khimii, v. 36, no. 1, 1963, 218 - 220

TEXT: The present work is a continuation of an earlier study (Izv. vuzov, Tsvet. Metallurg., 6, 58 (1961)). The activities, a_S, were determined from emf measurements, at 1250°C, with a solid metallic reference electrode, and the calculations were performed by graphical integration of the Gibbs-Duhem equation in the form suggested by Vagner (Termodinamika splavov [Thermodynamics of alloys], Metallurgizdat (1957))

$$\lg \gamma_S = \int_0^{N_{Me}} \frac{\lg \gamma_{Me}}{(1 - N_{Me})^2} dN_{Me} - \frac{N_{Me}}{1 - N_{Me}} \lg \gamma_{Me} . \qquad (1)$$

Card 1/2

The activity of sulfur ...

taking a_S as unity for compositions to FeS, CoS, and Ni_3S_2. The results are presented in graphical form and show (a) strong negative deviations of S from ideality in all 3 cases, indicating strong bonding of S to Fe, Co and Ni, particularly for low atom % S, (b) Co-S bond is stronger than Fe-S bond, (c) good agreement with available literature data, and (d) dependability of the method used. There are 3 figures.

SUBMITTED: March 26, 1962

Card 2/2

REMEN', T.F.; KHEYFETS, V.L.; VAYSBURD, S.Ye.

Activity of metals in binary systems Fe - S, Co - S and Ni - S.
Izv. vys. ucheb. zav.; tsvet. met. 4 no.6:58-64 '61.
(MIRA 14:12)

1. Proyektnyy i nauchno-issledovatel'skiy institut "Gipronikel'".
(Sulfides—Metallurgy)
(Activity coefficients)

VAYSBURD, S.Ye., inzh.; KHEYFETS, V.L., kand.tekhn.nauk

Ionic model of a molten iron-bearing silicate and the activity coefficient of iron in liquid slags. Izv.vys.ucheb.zav.; chern. met. 2 no.5:11-18 My '59. (MIRA 12:9)

1. Leningradskiy institut Gipronikel'. Rekomendovano kafedroy elektrometallurgii tsvetnykh metallov Leningradskogo politekhnicheskogo instituta.
(Activity coefficients) (Slag)

ABUSHKEVICH, P.V.; VAYSBRUD, V.I.; KULIKOV, I.A.; LEV, M.I.; MAZURIN, N.D.; ROZINA-ITSKINA, TS.S.; TIKHONOV, G.I.

Epidemic and etiological nature of the virus influenza epidemic in Khabarovsk in January-March 1959. Vop. virus. 5 no. 6:750 N-D '60. (MIRA 14:4)

(KHABAROVSK--INFLUENZA)

VAYSBURD, S.Ye.; VERNER, B.F.; KHEYFETS, V.L.

Activity of iron in Fe - Ni - S melts. Izv.vys.ucheb.zav.; tsvet.met. 5 no.1:59-67 '62. (MIRA 15:2)

1. Proyektnyy i nauchno-issledovatel'skiy institut "Gipronikel'". (Activity coefficients) (Iron sulfides) (Nickel sulfides)

REMEN', T.F.; KHEYFETS, V.L.; VAYSBURD, S.Ye.

Activity of sulfur in binary systems Fe - S, Co - S, Ni - S.
Zhur.prikl.khim. 36 no.1:218-220 Ja '63. (MIRA 16:5)
(Alloys) (Sulfur) (Electromotive force)

REMEN', T.F.; KHEYFETS, V.L.; VAYSBURD, S.Ye.

Iron activity in the system Cu - Fe - S. Izv. vys. ucheb. zav.; tsvet. met. 5 no.6:57-61 '62. (MIRA 16:6)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy nikelevoy promyshlennosti.
(Systems(Chemistry))
(Iron—Testing)
(Activity coefficients)

83167
S/056/60/039/002/004/044
B006/B056

24.6900

AUTHORS: Vaysenberg, A. O., Smirnitskiy, V. A.

TITLE: Asymmetry in the $\pi^+ - \mu^+ - e^+$ Decay in a Magnetic Field

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 2 (8), pp. 242-248

TEXT: It was the purpose of the present paper to investigate the dependence of the asymmetry coefficient of the above reaction in photoemulsions of the type НИКФИ-Р (NIKFI-R) on the magnetic field strength in the range of 0 - 20 koe. The asymmetry coefficients were measured at H = 0, 54, 110, 206, 420, 680, 1300, 1900, 2500, 3500, 5100, 6300, 14,000 and 17,000 oe, where $\vec{H}$ was parallel to the emulsion plane. For shielding the field in the synchrocyclotron room, a double soft-iron shield was used. The magnetic fields in which asymmetry was measured, were generated by an electromagnetic. The authors thank I. I. Gurevich and B. A. Nikol'skiy for placing a special electromagnet at their disposal for the purpose of producing the 14- and 17-koe fields. The

Card 1/3

Asymmetry in the $\pi^+ - \mu^+ - e^+$ Decay in a Magnetic Field

83167
S/056/60/039/002/004/044
B006/B056

emulsion chambers consisted of 50 to 100 400-μ NIKFI-R layers, which had been bombarded with π^+-mesons on the synchrocyclotron of the OIYaI (Joint Institute of Nuclear Research). The asymmetry coefficient a is calculated from the relation $a = K(N_v - N_n)/(N_v + N_n)$, where N_v denotes the number of decays for which the projection of γ and β lay in one quadrant of the ocular scale (the first or third), N_n denotes the number of decays where these projections lay in the opposite quadrant. γ and β are the angles formed by $\vec{H}$ and the emission directions of μ^+ and e^+, respectively. In first approximation, which is accurate up to some %, K = 1.57. The results of these investigations are shown in Tables and in a diagram, and are the following: 1. a grows from -0.09 ± 0.01 (H=0) to -0.29 ± 0.01 (H = 17 - 27 koe). 2. In the range of 0-17 koe, the course of the a(H) curve is such that a is not proportional to $x^2/(1+x^2)$ (see Fig.) as would be expected to follow from the polarization formula for the Paschen-Back effect in muonium; ($x = H/H_0$, H_0 = 1580 oe, - the mean field produced by the magnetic moment of the μ^+-meson on the electron orbit in muonium). 3. The observed effect may, however, be explained by the

Card 2/3

83167

Asymmetry in the $\pi^+ - \mu^+ - e^+$ Decay in a Magnetic Field

S/056/60/039/002/004/044
B006/B056

Paschen-Back effect in muonium if it is assumed that an additional depolarization due to charge exchange occurs at the end of the μ^+-path or to exchange collisions after its stoppage. 4. The maximum a-value of -0.29 ± 0.01 is lower by 10% than the value $a = -1/3$, which follows from the theory of weak V-A interaction. This deviation cannot be explained by errors in measurement; it is due either to an additional depolarization of about 10% in the emulsion, or the μ-e decay asymmetry cannot be satisfactorily described by weak V-A interaction. 5. In this as well as in a previous paper (Ref. 2), about 340,000 π^+-μ-e decay events were evaluated. A search was made especially for $\mu^+ \to 3e$ or $\mu \to e+\bar{\nu}+\nu+\gamma$ decays, but not a single case could be found. The authors thank A. I. Alikhanov for his interest, D. M. Samoylovich, Ya. B. Zel'dovich, A. M. Perelomov, and L. P. Panov for their assistance. There are 1 figure, 3 tables, and 14 references: 4 Soviet and 10 US.

SUBMITTED: February 23, 1960

Card 3/3

Vaysburg, A.O.

PHASE I BOOK EXPLOITATION SOV/4555

Vsesoyuznyy sovet nauchno-tekhnicheskikh obshchestv

Mezhkristallitnaya korroziya i korroziya metallov v napryazhennom sostoyanii (Intercrystalline and Stress Corrosion of Metals) Moscow, Mashgiz, 1960. 358 p. 3,000 copies printed.

Ed.: I.A. Levin, Candidate of Technical Sciences; Ed. of Publishing House: I.I. Lesnichenko, Engineer; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Metalworking and Instrument Making (Mashgiz): V.V. Rzhavinskiy, Engineer; Editorial Board: I.A. Levin, Candidate of Technical Sciences (Chairman), V.P. Batrakov, Candidate of Technical Sciences, V.M. Nikiforova, Candidate of Technical Sciences, and A.V. Turkovskaya, Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for technical personnel concerned with problems of corrosion of metals.

COVERAGE: The collection contains discussions of intercrystalline corrosion of stainless steels and stress corrosion of carbon steels, low-alloy and stainless steels, and light-weight and nonferrous alloys. The tendency of steels of various composition and system to corrode under certain conditions is discussed and the nature of corrosion and corrosion cracking is analysed. No personalities are mentioned. Most of the articles are accompained by bibliographic references, the majority of which are Soviet.

Gurvich, L. Ya., Candidate of Technical Sciences, and K.A. Khroshchevskaya, Engineer. Rapid Method of Determining the Tendency of Stainless Steels Toward Intercrystalline Corrosion 162

III. STRESS CORROSION OF STAINLESS STEELS

Ryabchenkov, A.V., Doctor of Chemical Sciences, Professor, and V.M. Nikiforova, Senior Scientific Worker, Candidate of Technical Sciences. The Role of Electrochemical Factors in the Process of Corrosion Cracking of Austenitic Steels 178

Kagan, D. Ya., Candidate of Technical Sciences, and T.M. Mikhaylova, Junior Scientific Worker. Effect of Various Environments on the Stress Corrosion of Austenitic Steels at Supercritical Parameters 198

Slonyanskaya, F.B., Candidate of Technical Sciences (Deceased). Stress Corrosion of Metals in Sulfur-Removing Equipment Sciences) 210

[illegible] M.G., I.B. Kryanin, Candidates of Technical Sciences, and G.I. Barushkina. Resistance of Hydroturbine Blade Steels to Cavitation Erosion Depending Upon the Uniformity of Structure and Mechanical Properties 217

IV. STRESS CORROSION OF CARBON STEELS AND LOW-ALLOY STEELS

Azhogin, F.F., Candidate of Technical Sciences. Corrosion Cracking of High-Strength Steels 231

Kristal', M.M. Corrosion Cracking of Welding Equipment Made of Carbon Steel in Sodium Nitrate Solutions 251

Titov, V.A., Candidate of Technical Sciences. The Effect of Hydrogen Diffusion of Steel on Its Endurance 257

A.O. Vaysburg, N.A. Averina and V.I. Kazarina, Engineers, participated in this study prepared at the Moskovskiy institut stali im. I.V. Stalina (Moscow Steel Institute imeni I.V. Stalin)

Fedotov, O.G., Engineer, S.I. Vol'fson, Kh. I. Cheskis, Candidates of Technical Sciences, and L.D. Zakharochkin, Engineer. Cracking of Safety Valve Springs in Contact with Unstabilized Gasolines and Liquefied Gases 269

152

Card 4/9

VAYSBURG, L.,konstruktor; VYSHLOV, V.,konstruktor

PTB-2 loader. Mor.flot 18 no.3:22-23 Mr '58. (MIRA 11:4)

1. TSentral'noye proyektno-konstruktorskoye byuro No.1 Ministerstva morskogo flota.
(Loading and unloading)

VAYSBURG, S.I., podpolkovnik meditsinskoy sluzhby

Radiography of the bones and joints with the patient in a vertical position. Voen.-med. zhur. no.9:72 S '55. (MLRA 9:9)
(BONE--RADIOGRAPHY)
(JOINTS--RADIOGRAPHY)

[illegible], S. I.

[illegible], S. I.: "[illegible]," Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, [illegible]. (Discussion [illegible] Degree of Candidate in Chemical Sciences)

So: [illegible] Chemical Science, 1946.

VAYSBURG, S.I., podpolkovnik med.sluzhby

X-ray observations of gastrointestinal motor functions following appendectomy. Voen.-med.zhur. no.11:73-74 N '57. (MIRA 11:4)
(APPENDECTOMY) (ALIMENTARY CANAL--RADIOGRAPHY)

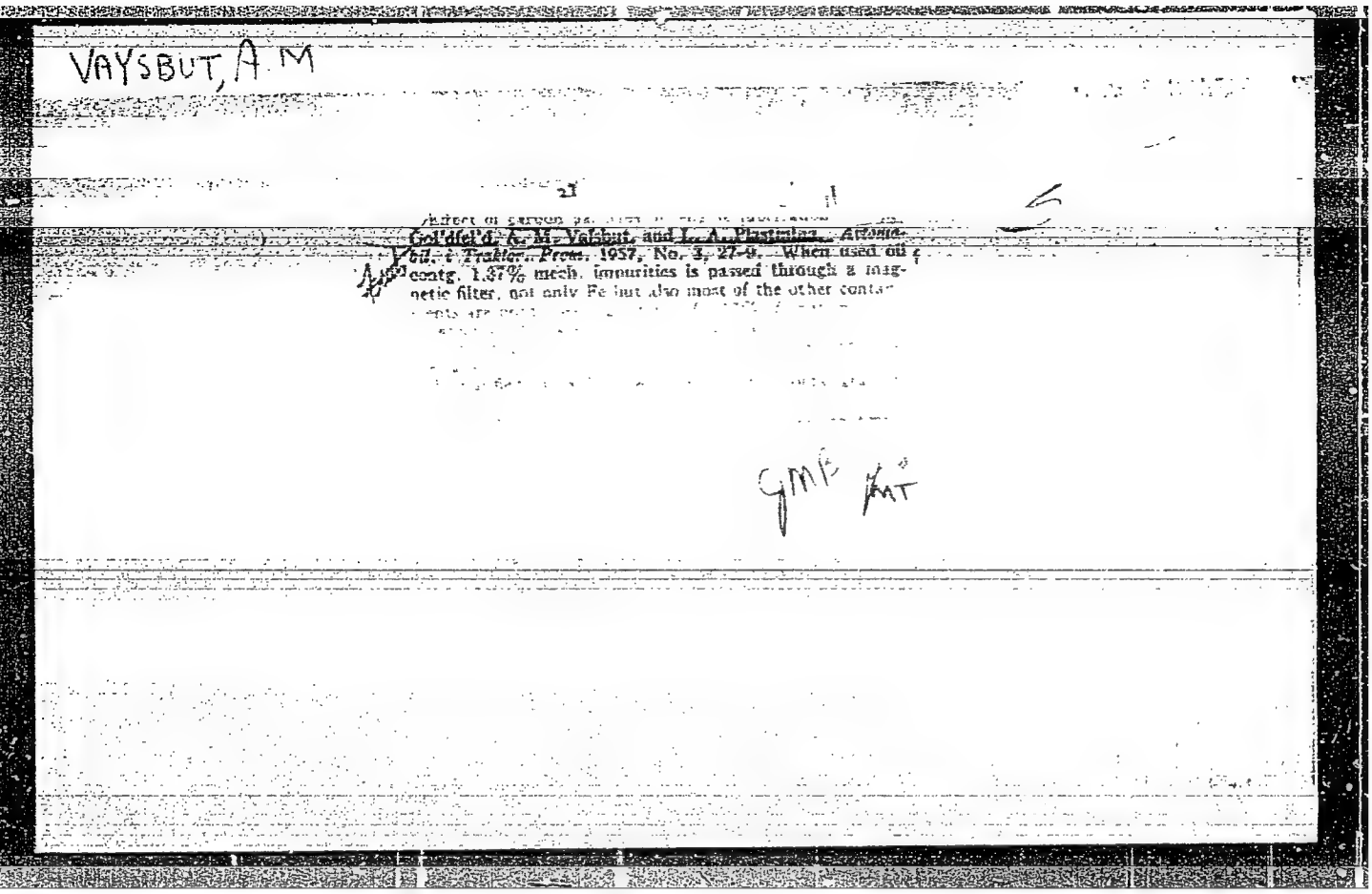
VAYSBURG, S.I., podpolkovnik meditsinskoy sluzhby

Use of stereoscopic X ray. Voen.-med. zhur. no.5:33-36 My '60.
(MIRA 13:7)

(X RAYS)

KRITS, I.G.; VAYSBURG, V.A.

Manufacturing fittings by die stamping. Biul.tekh.-ekon.inform.Gos. nauch.-issl.inst.nauch.i tekh.inform.18 no.9:17-18 S '65.
(MIRA 18:10)



VAYSBUT, A. M

21

Gol'dfel'd, L. M. Vaisbut, and L. A. Plastinina. *Avtom. Vod. i Traktor. Prom.* 1957, No. 3, 27-9. When used oil contg. 1.87% mech. impurities is passed through a magnetic filter, not only Fe but also most of the other contam-

GMP AMT

SOV/113-59-2-6/20

AUTHOR: Gol'dfel'd, S.M., Vaysbut, A.M. and Plastinina, L.A.

TITLE: Various Filtering Systems of Oil-Cleaning in Engines (Ochistka masla v dvigatelyakh pri razlichnykh sistemakh filtratsii)

PERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 2, pp 11-13 (USSR)

ABSTRACT: The article deals with various oil-filtering systems in internal-combustion engines. These systems reduce the wear on piston rings, cylinders, and on lead-bronze bushings in connecting rods. The tests were conducted by the Odessa Electrotechnical Institute of Communications, with the "D-54" four-cycle engines and with the "YAMZ-204" and "YAMZ-206" two-cycle engines. The results reveal that deterioration of moving parts depends largely on the degree of acid and water in the oil, and on the size of particles suspended in it. As countermeasures, various filtering systems were tested including one with a magnetic separator of tiny particles. The best results were obtained with systems using reactive centrifuges and ASFO-type filters. There are 4 tables, 1 graph, and 3 Soviet references.

Card 1/2

Various Filtering Systems of Oil-Cleaning in Engines SOV/113-59-[illegible]-6/20

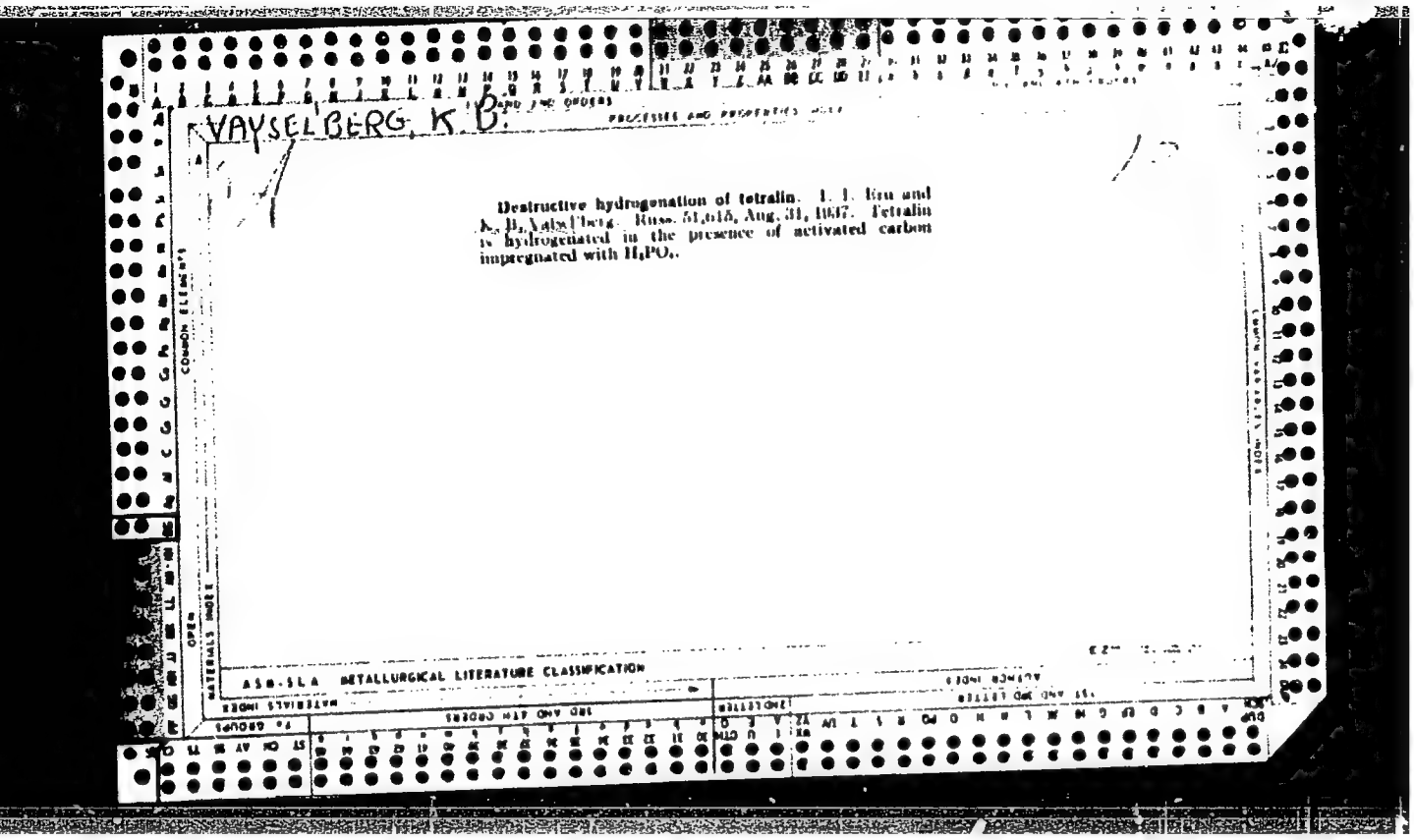
ASSOCIATION: Odesskiy elektrotekhnicheskiy institut svyazi (Odessa Electrotechnical Institute of Communications).

Card 2/2

GOL'DFEL'D, S.M.; VAYSBUT, A.M.

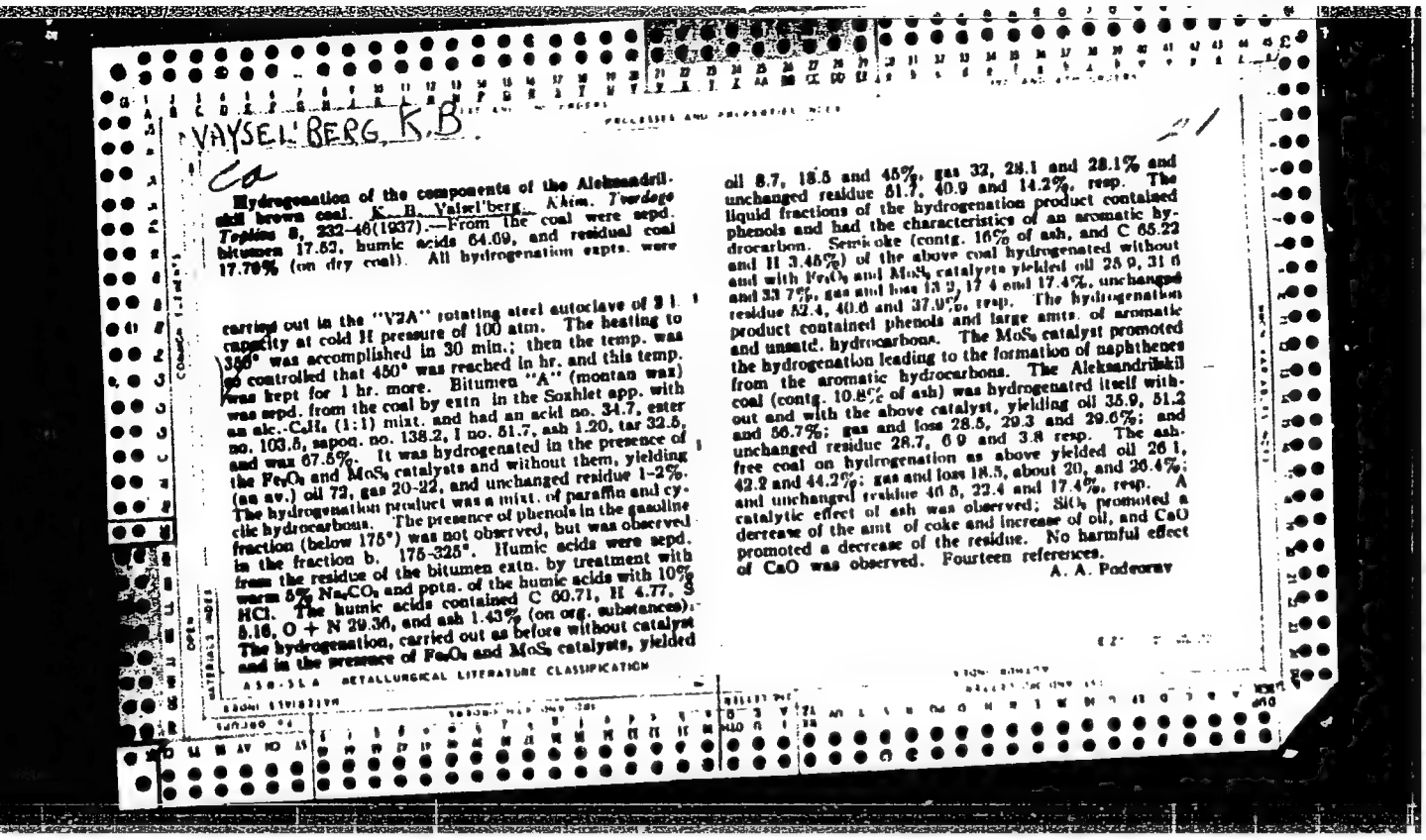
Use of an auxiliary magnetic separator for improving centrifugal oil cleaning. Avt. prom. 27 no. 4:12-14 Ap '61. (MIRA 14:4)

1. Odesskiy elektrotekhnicheskiy institut svyazi.
(Automobiles--Engines--Oil filters)



VAYSELBERG, K. B.

Destructive hydrogenation of tetralin. I. I. Ilin and K. B. Vaiselberg. Russ. 51,015, Aug. 31, 1937. Tetralin is hydrogenated in the presence of activated carbon impregnated with H_3PO_4.



VAYSEL'BERG, K.B.

Ca

Hydrogenation of the components of the Aleksandrilskii brown coal. K. B. Vaisel'berg. *Khim. Tverdogo Topliva* 8, 232–46(1937).—From the coal were sepd. bitumen 17.83, humic acids 64.09, and residual coal 17.70% (on dry coal). All hydrogenation expts. were carried out in the "V2A" rotating steel autoclave of 9 l. capacity at cold H pressure of 100 atm. The heating to 380° was accomplished in 30 min.; then the temp. was so controlled that 450° was reached in hr. and this temp. was kept for 1 hr. more. Bitumen "A" (montan wax) was sepd. from the coal by extn in the Soxhlet app. with an alc.-C_6H_6 (1:1) mixt. and had an acid no. 34.7, ester no. 103.8, sapon. no. 138.2, I no. 51.7, ash 1.20, tar 32.5, and wax 67.5%. It was hydrogenated in the presence of the Fe_2O_3 and MoS_3 catalysts and without them, yielding (as av.) oil 72, gas 20–22, and unchanged residue 1–2%. The hydrogenation product was a mixt. of paraffin and cyclic hydrocarbons. The presence of phenols in the gasoline fraction (below 175°) was not observed, but was observed in the fraction b. 175–325°. Humic acids were sepd. from the residue of the bitumen extn. by treatment with warm 5% Na_2CO_3 and pptn. of the humic acids with 10% HCl. The humic acids contained C 60.71, H 4.77, S 5.16, O + N 29.36, and ash 1.43% (on org. substances). The hydrogenation, carried out as before without catalyst and in the presence of Fe_2O_3 and MoS_3 catalysts, yielded oil 8.7, 18.5 and 45%; gas 32, 28.1 and 28.1% and unchanged residue 51.7, 40.9 and 14.2%, resp. The liquid fractions of the hydrogenation product contained phenols and had the characteristics of an aromatic hydrocarbon. Semicoke (contg. 16% of ash, and C 65.22 and H 3.46%) of the above coal hydrogenated without and with Fe_2O_3 and MoS_3 catalysts yielded oil 25.9, 31.6 and 33.7%; gas and loss 15.9, 17.4 and 17.4%, unchanged residue 52.4, 40.6 and 37.0%, resp. The hydrogenation product contained phenols and large amts. of aromatic and unsatd. hydrocarbons. The MoS_3 catalyst promoted the hydrogenation leading to the formation of naphthenes from the aromatic hydrocarbons. The Aleksandrilskii coal (contg. 10.8% of ash) was hydrogenated itself without and with the above catalyst, yielding oil 35.9, 51.2 and 56.7%; gas and loss 28.5, 29.3 and 29.6%; and unchanged residue 28.7, 6.9 and 3.8 resp. The ash-free coal on hydrogenation as above yielded oil 26.1, 42.2 and 44.2%; gas and loss 18.5, about 20, and 26.4%; and unchanged residue 46.5, 22.4 and 17.4%, resp. A catalytic effect of ash was observed; SiO_2 promoted a decrease of the amt of coke and increase of oil, and CaO promoted a decrease of the residue. No harmful effect of CaO was observed. Fourteen references.

A. A. Podcorav

A50-51A METALLURGICAL LITERATURE CLASSIFICATION

VAYSEL'D, O. I.

Cysts

Case of strangulating obstruction caused by appendiceal cyst. Vest. khir. 72 no.7 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

VAYSELEVA, S. M. and Patukina, R. F.

Vayseleva, S. M. "Microflora of various forms and zones in the inflammations of the pulp," Trudy Kazansk. gos. stomatol. in-ta, Issue 2, 1949, p.209-217, - Bibliog: 14 items.

SO: U-5240, 17 Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

ZIV, Ye.F.; VAYSENBERG, A.I.; STEPANOV, I.S., nauchnyy red.; YERSHOV, A.D., glavnyy red.; GINZBURG, A.I., red.; ZVEREV, L.V., red.; KREYTER, V.M., red.; MOKROUSOV, V.A., red.; SOLOV'YEV, D.V., red.; KHRUSHCHOV, N.A., red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V., red.; NEKRASOVA, N.B., red.izd-va; IVANOVA, A.G., tekhn.red.

[Industry's requirements as to the quality of mineral raw material; handbook for geologists] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. No.49. [Niobium and tantalum] Niobii i tantal. Izd.2., perer. 1959. 49 p. (MIRA 12:12)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya. (Niobium) (Tantalum)

SAMSONOV, Grigoriy Valentinovich; KONSTANTINOV, Vladimir Ivanovich. Prinimali uchastiye: ZIV, Ye.F.; KOSOLAPOVA, T.Ya. NIKOLAYEV, N.S., doktor khim.nauk, setsenzent; VAYSENBERG, A.I., kand.tekhn. nauk, retsenzent, red.; KOLCHIN, O.P., kand.tekhn.nauk, retsenzent, red.; ARKHANGEL'SKAYA, M.S., red.izd-va; VAYNSHTEYN, Ye.B., tekhn. red.

[Tantalum and niobium] Tantal i niobii. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 264 p. (MIRA 12:11)

(Tantalum) (Niobium)

VAYSENBERG, A. O.

Adsorption of cosmic rays in a strong magnetic field at 3250 meters above sea level. A. I. Alikhanyan, A. A. Alikhanov, S. Ya. Nikitin, and A. Vaysenberg. J. Phys. (U.S.S.R.) 10, 294-5 (1946); cf. preceding abstr.- Analysis of the soft component of cosmic rays by means of an intense magnetic field shows that the component having a range of 4-4.5 cm. in Pb is not deflected by the field, and confirms that the particles generated in Pb are protons. B. A.

VAYSENBERG, A. O.

Specialty - Nuclear Physics

Scattering of relativistic electrons at a large angle. A. I. Alikhanyan, A. I. Alikhanov, and A. Vaysenberg. J. Exptl. Theoret. Phys. (U.S.S.R.) 16, 369-78 (1946); J. Phys. (U.S.S.R.) 9,280-8 (1945).- Fast electrons from 100-200-millicurie radon sources (Ra C electrons, upper limit 3175 kv.) were monochromatized by a magnetic spectrograph and beams of energies from 600 to 2000kv. were scattered on thin films placed at 45^0 to the beam. Scattering was observed with Geiger-Muller counters at an angle between 82^0 and 97^0; γ-radiation from the source was eliminated. The scattering metal films were obtained by thermal vacuum evapn. and deposited on 2-4- celluloid foils, which contributed not over 10% to the total scattering. By the criterion of linearity of scattering intensity and film thickness, preliminary expts. on Al, Ni, Ag, and Au layers showed that singleness of scattering is approximated the better the faster the electrons, example Al 3.0 and 6.0 mg./sq. cm., energy of electrons 850, 1000, 1200, 1330 kv., ratios of intensities scattered by the thicker and by the thinner film = 2.71, 2.55, 2.19, 2.06, resp. According to Wentzel's (C.A. 17, 923) criterion for single scattering at an angle φ, namely not more than two deflections on the av. by an angle $\leq \varphi/4$, scattering of 1000-kv. electrons in Al 100 mg./sq. cm. thick should still be single, whereas exptl. results show that multiple scattering occurs even in 6 mg./sq. cm. Al; consequently, Wentzel's criterion is not applicable. On the other hand, the exptl. ratios obtained check satisfactorily with Artsimovich's formula $N = x + [(1.51 \times 10^{-2} x^2)/E^2]$ where N = no. of electrons scattered by Al, E = energy of electrons in m.e.v., x= THICKNESS of film in Al, and bear out his basic representation of the possibility of

deflections by large angles through repeated deflections by smaller angles. Final detns. were made with x and E for which scattering is most nearly single, example Al 1.55, 3.00, 6.00 mg./sq. cm., E = 600-1050, 800-1200, 1100-1600 kv., resp. For celluloid (at. no. Z = 7.1), Al, Cu, Ni, Ag, Au (Z = 79), probability of scattering varies with E along the same curve, identical with Mott's theoretical quantum-mechanical curve (cf. C.A. 23, 5406). Abs. values of the scattering on light nuclei and their dependence on Z also check with Mott's theory (example, for Al 3 mg./sq. cm., 1000 kv., within 10-15%), with the exception of Au, for which the exptl. cross-section is about 2.5 times smaller than that predicted by the theory; for Ag (Z = 47), owing to the absence of a numerical formula, agreement cannot be asserted. The rapid increase of the effective cross section on scattering by higher angles, claimed by Skobel'tsyn and Stepanova (C.A. 30, 3317[1]; 32,2825[9]), is not confirmed.

N. Thon

VAYSENBERG, A. O.

"Spectrum of Mesotrons at the Altitude of 3,250 Meters Above Sea Level." Sub 16 May 47, Order of the Labor Red Banner Inst of Physical Problems, Acad Sci USSR

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

VAYSENBERG, A. O.

USSR/Nuclear Physics - Cosmic Radiation May 47
Nuclear Physics - Particles

"The Existence of a Particle With Mass, Between the Masses of a Mesotron and Proton," A. I. Alikhan'yan, Corr Mem, Acad Sci USSR; A. I. Alikhanov, A. O. Vaysenberg, Academician, 9 pp

"Vest Akad Nauk SSSR" No 5

During period 1942-1946 authors were stationed on Mount Alagez, at an altitude of 3,250 m above sea level. Discerned cosmic particles very different from mesotrons and protons. Series of tests revealed data which showed that these particles to be ionized gases, two to three times greater than either protons or mesotrons. Mass of this intermediate particle is 250 to 2,000 m_0. They are either positive or negative. Authors express gratitude to V. M. Kharitonov, and M. I. Dayon.

PA 54T69

VAISENBERG, A. V.

Existence of particles with a mass intermediate between the mesotron and proton. A. I. Alikhanyan, A. I. Alikhanov, and A. Vaisenberg. Compt. rend. acad. sci. U.R.S.S. 55, 701-4 (1947) (in English); J. Phys. (U.S.S.R.) 11, 97-9 (1947) (in English); cf. C.A. 40, 1086[9], 1387[6].- Cosmic rays were investigated at an altitude of 3250 m. above sea level by using a system of counters which permitted simultaneous measurement of both the curvature of a particle's path and its range. Analysis of the results obtained shows that cosmic rays contain pos. and neg. particles, called "barytrons," with a mass larger than that of the meson. More than 4,000 barytrons have been observed, and the no. of pos. barytrons appears to be 1.7 times larger than the no. of neg. barytrons. At an altitude of 3250 m. above sea level, the no. of barytrons amount to 10% of the no. of mesons. Frank Gonet

Inst. for Physical Problems, AS USSR

VAYSENBERG, A. O.

Existence in cosmic rays of positive and negative particles with a mass greater than the mass of the meson. A. I. Alikhanyan, A. I. Alikhanov, and A. Vaysenberg. Zhur. Eksptl. Teoret. Fiz. 18, 301-36 (1948); cf. C.A. 43, 1642c, 4105af.- The hard and soft components of cosmic rays at 3250 m. above sea level were analyzed in a magnetic field by an elaborate counter arrangement, and curves are given for the no. of trajectories vs. displacement of particles. Pos. and neg. particles are indicated with masses greater than the mass of a meson, some with a mass greater than the proton mass.

F.H. Murray

VAYSENBERG, A. PA 12/49T99

USSR/Nuclear Physics - Mesotrons Apr 48
Nuclear Physics - Cloud Chambers

"Photographing the Disassociation of Heavy Mesotrons in a Wilson Chamber," A. Vaysenberg, 4½ pp

"Uspekhi Fiz Nauk" Vol XXXIV, No 4

After a paragraph on the work of Alikhan'yan, Alikhanov and himself on Mt Alagez in 1946, Vaysenberg devotes remainder of article to a paper by Rochester and Butler. ("Nature," 1947).

[redacted] 12/49T99

VAYSENBERG, A. PA 11/49T92

USSR/Nuclear Physics - Mesotrons Jun 48
Nuclear Physics - Cloud Chambers

"New Photographs of Heavy Mesotrons in a Wilson Chamber," A. Vaysenberg, 1 p

"Uspekhi Fiz Nauk" Vol XXXV, No 2

Photographs appeared in first number of "Bulletin of the American Physical Society" for 1948. Mesotron mass calculated therefrom confirms 1946 observations of Alikhanyan and other Soviet physicists.

[redacted] 11/49T92

VAYSENBERG, A.

USSR/Nuclear Physics - Cosmic Radiation Jun 48
Nuclear Physics - Particles

"Spectrum of Varitron Mass at 3,250 Meters Above Sea Level," A. Alikhanyan, Corr Mem, Acad Sci USSR; A. Vaysenberg, V. Kharitonov, M. Dayon, Inst of Phys Problems, Acad Sci USSR, and Phys Inst, Acad Sci Armenian SSR, 4 pp

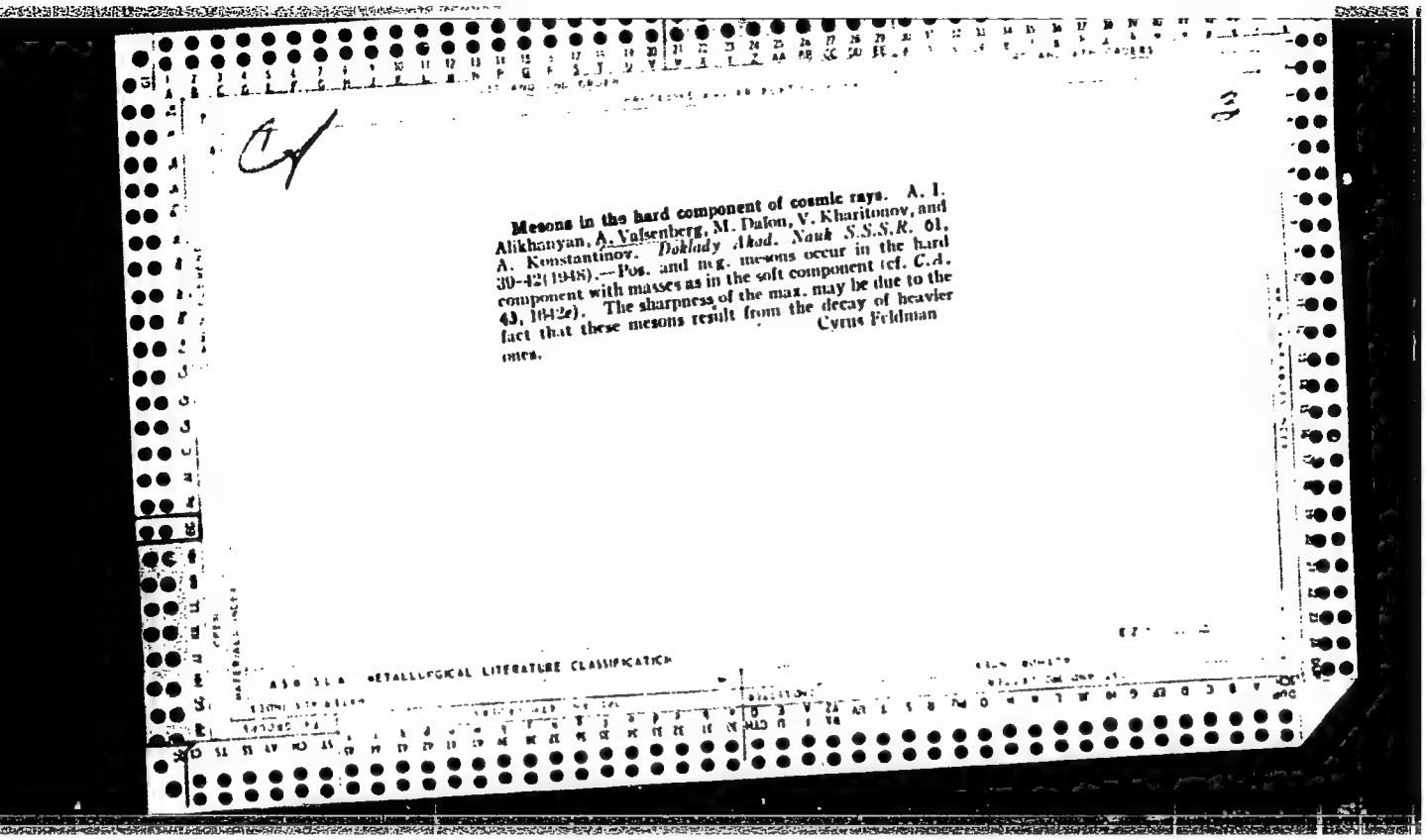
"Dok Ak Nauk SSSR" Vol LX, No 9

Investigation on subject began in 1946 in Cosmic Ray Laboratory on Mount Alagez. Results published in various journals, including Vest Ak Nauk SSSR, No 5, 1947. (See Abstract 54T69). Authors discovered particles intermediate between mesotrons and [redacted] 6/49T91

USSR/Nuclear Physics - Cosmic Radiation (Contd) Jun 48

protons, calling them varitrons because they can be either positive or negative. Work was resumed in 1947. Describes improvements in apparatus. Tabulates masses and charges of particles observed. Graphs show spectra of particles which passed through 0.8-cm lead sheet but were absorbed in 1.05 cm lead sheet. Consist of a series of well defined maxima and minima. Authors consider this supports their previous hypotheses on ionization of particles. Submitted 29 Apr 48.

[redacted] 6/49T91



Mesons in the hard component of cosmic rays. A. I. Alikhanyan, A. Yulsenberg, M. Dafon, V. Kharitonov, and A. Konstantinov. *Doklady Akad. Nauk S.S.S.R.* 61, 39–42(1948).—Pos. and neg. mesons occur in the hard component with masses as in the soft component (cf. *C.A.* 43, 1042e). The sharpness of the max. may be due to the fact that these mesons result from the decay of heavier ones.

Cyrus Feldman

VAYSENBERG, A.

USSR/Nuclear Physics - Cosmic Radiation Jul 48
Nuclear Physics - Particles, Charged - Trajectories

"Varitrons in the Hard Component of Cosmic Rays," A. Alikhanyan, Corr Mem, Acad Sci USSR, A. Vaysenberg, M. Dayon, V. Kharitonov, A. Konstantinov, Inst of Phys Problems, Acad Sci USSR, and Phys Inst, Acad Sci, Armenian SSR, 3½ pp

"Dok Ak Nauk SSSR" Vol LXI, No 1

Previous article in "Dok Ak Nauk SSSR" Vol LX, No 9 described spectra of varitron masses obtained by examination of trajectories of particles absorbed in load filters installed above a series of counters. Present article discusses data obtained on the spectrum of the hard component, Submitted 18 May 1948.

PA 8/49T105

VAYSENBERG, A.O.

24760. VAYSENBERG, A.O. O Raspade Yaritronov. Zhurnal Iksperim. I Teoret. Fiziki, 1949, VYP. 8, S. 727-30.

SO: Letopis' No. 33, 1949

VAYSENBERG, A. O. PA 61/49T79

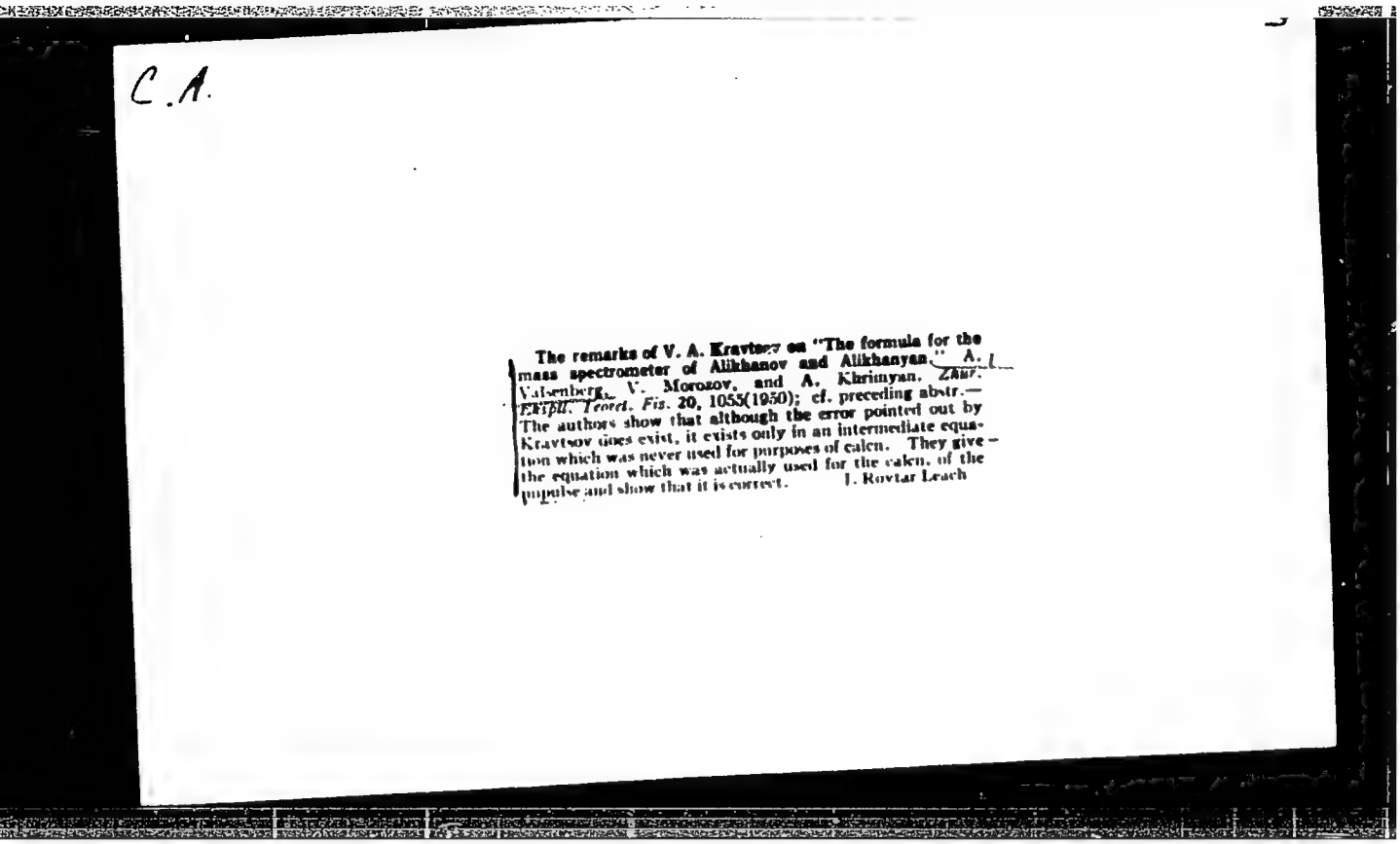
USSR/Nuclear Physics - Varitrons Aug 49
Nuclear Physics - Mesons

"Disintegration of Varitrons," A. O. Vaysenberg, Inst of Phys Problems, Acad Sci USSR, 3 pp

"Zhur Eksper i Teoret Fiz" Vol XIX, No 8

Recorded the spectrum of varitron masses at 3,250 meters (Alagez Mountain) using a multivibrator circuit through which the lifetime of varitrons was determined in the order of microseconds. Showed that, in this time interval, varitrons with masses greater and less than 220 m_e disintegrated as well as varitrons with mass 220 m_e. Submitted 9 Apr 49.

61/49T79



C.A.

The remarks of V. A. Kravtsov on "The formula for the mass spectrometer of Alikhanov and Alikhanyan." A. I. Valsenberg, V. Morozov, and A. Khrimyan. *Zhur. Eksptl. Teoret. Fiz.* 20, 1055(1950); cf. preceding abstr.— The authors show that although the error pointed out by Kravtsov does exist, it exists only in an intermediate equation which was never used for purposes of calcn. They give the equation which was actually used for the calcn. of the impulse and show that it is correct. J. Rovtar Leach

VAYSENBERG A.O.

ELMORE, William Cronk; VAYSENBERG, A.O. [translator]; TROITSKAYA, V.A. [translator]; MICHULIN, V.V., redaktor.

[Electronics in nuclear physics] Elektronika v iadernoi fizike. Moskva, Izd-vo inostrannoi lit-ry, 1951. 406 p. [Microfilm] (MLRA 7:11)

(Electronic apparatus and appliances) (Electron-tube circuits)

VAYSENBERG, A.

Cosmic Rays

Use of scintilator - calculators in studies of cosmic radiation. Usp.fiz.nauk., 45, no. 4, 1951.

Monthly List of Russian Accessions, Library of Congress, May 1952. UNCLASSIFIED.

VAYSENBERG, A.

Mesotrons

Multiple dispersion of π-mesons., Usp. fiz. nauk, 45, no. 4, 1951.

Monthly List of Russian Accessions, Library of Congress, May 1952. UNCLASSIFIED.

VAYSENBERG, A. O., SELINOV, I. P.

MATTER

Elementary particles. Fiz. v shkole 12 no. 3 (1952)

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

VAYSENBERG, A. O.

PA 249T84

USSR/Nuclear Physics - Neutrons Sep 52

"Deflection of Neutrons in a Field of Gravitational Force," A. O. Vaysenberg, Cand Phys-Math Sci

Priroda, Vol 41, No 9, p 102

Analysis of the data of expts on the distribution of velocities of neutrons emitted in two beams from a neutron source leads to the conclusion that the acceleration of the gravitational force acting on the neutron beam and causing its displacement is equal to $g = (935 \pm 70)$ cm/sec^2, which is in agreement, within the limits of exptl errors, with the usual value 980, true for macroscopic bodies. Review of the Engligh-language article by A.McReinolds Phys Rev, 1951

249T84

VAYSENBERG, A.

Quantum Theory

Measuring the velocity of quanta in air.
Usp.fiz.nauk 46 no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

[illegible], A. O.

Vaysenberg, A. O. -- "An Investigation of the Spectrum and Composition of Cosmic Radiation at 3,250 Meters Above Sea Level." Dr Phys-Math Sci, Moscow Mechanics Inst, Moscow 1953. (Referativnyy Zhurnal--Fizika, Jan 54,

SO: SUM 168, 22 July 1954

VAYSENBERG, A.O.

USSR

The dependence of counter efficiency on overvoltage. A. O. Vaisenberg and V. G. Kirillov-Ugryumov. *Zhur. Eksptl. i Teoret. Fiz.* 24, 124–5(1953).—The effect of overvoltage was compared for Geiger counters filled with A and He. The efficiency of the former was completely independent of overvoltage, but for the latter there was a strong dependence of efficiency on overvoltage. J. R. Leach

VAYSENBERG, A-O.

USSR

537.542

11155. **Arrangement of delayed coincidences with a resolving period of 10^{-7} sec.** A. O. VAISENBERG. *Zh. eksper. teor. Fiz.*, **24**, *No.* 5, 545–9 (1953) *In Russian.*

An electronic circuit for delayed coincidences, suitable for measuring periods in the range from 2×10^{-7} to 10^{-2} sec, is fully described and illustrated. It is one of the variants of the arrangement described by Zhdanov and Naumov [Abstr. 3299 (1949)], involving the use of the self-extinguishing counters as detectors, which generate the short-period voltage pulses when a meson or disintegration particle passes through them. It has been found that, in counters 60 cm long and 3 cm dia., filled with A (8 cm Hg) and methylal (1 cm Hg), a lag of 0·5–1 μsec occurred once in 400, and a lag exceeding 1 μsec once in 5000 passages.

P. LACHMAN

VAYSENBERG, A.O.

4

USSR.

537.591.1

11175. Determination of the mass of the charged cosmic-ray particles with a life period of 2 μsec. A. O. VAISENBERG, G. A. MARIKYAN AND V. M. KHARITONOV. *Zh. eksper. teor. Fiz.*, 24, No. 5, 550–61 (1953) *In Russian.*

See Abstr. 1032 (1950), 11155 (1954). The research was carried out to provide answers to the following questions: (1) Does the air stream of cosmic rays at an altitude of 3250 m contain, besides the μ-mesons, also other unstable particles with the same life period? (2) What is the nature of the decay of particles to which a mass greater than that of the proton should be ascribed? Masses of particles decaying within 2 μsec were determined by using an apparatus which is described and illustrated; all disintegrations observed can be explained by assuming the presence of the μ- and π-mesons. Besides, decays were observed, involving the incidence of the meson-generating protons on the absorbing substance.

F. LACHMAN

21 Jul 53

VAYSENBERG, A. O.

USSR/Nuclear Physics - Mesons, Slow

"Transient Effect of Slow Mesons," A. O. Vaysenberg;

DAN SSSR, Vol 91, No 3, pp 471-474

Describes expts, instruments, and method for detecting transient effect of mesons originating in vicinity of recorder. Results are plotted in curve of amount of decays in relation to thickness of graphite filter. Indebted to A. I. Alikhanyan, V. Smirnitskiy, and L. Novikov. Presented by Acad A. I. Alikhanov 30 May 53.

262T05

VAYSENBERG, A. O. 1

3
1

Photographic abs
P 4 1959
Industrial & Scientific Application of Photography

TRANSITION EFFECT FOR SLOW MESONS. A. O. Vaisenberg. Doklady Akad. Nauk S.S.S.R. 91, 483-5(1953) July 21. (In Russian)

If the formation of slow mesons by proton-neutron reaction has significant intensity, a noticeable transition effect is detectable by placing a slow-meson absorber over the detector. The arrangement used to detect the disintegration is described. Graphite was used as the meson generator. The number of transitions reach a maximum with 19.2 g/cm^2 of absorber. (J.S.R.)

10-28-54
AML

VAYSENBERG, A. O.

USSR/Nuclear Physics - Radioactivity

Card 1/1 : Pub. 124 - 8/29

Authors : Alikhanyan, A. I., Memb. Corresp. of Acad. of Sc. USSR.; and Vaysenberg, A. O.

Title : Artificial radioactivity

Periodical : Vest. AN SSSR 6, 51-61, June 1954

Abstract : Speeches held in commemoration of the 20th anniversary of the discovery, by Irene and Frederic Julio-Curie, of artificial radioactivity are presented. Various stages in the development of nuclear physics, beginning with the discovery by Marie Curie of two radioactive elements Po and Ra (1897-1898), the discovery of neutron radioactivity by Fermi and associates and including developments up to 1953, were mentioned. The direct relation between artificial radioactivity and various cosmogonic problems is explained. The speakers also predicted that by 1970 the total amount of radioactive fission products obtained from reactors will reach 100 tons per year which will correspond to a radioactive radiation energy of 12 million kw.

Institution : ...

Submitted : ...

WAJSENBERG, A.O.

Category : POLAND/Nuclear Physics - Structure and Properties of Nuclei C-4

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3176

Author : Wajsenberg, A.O.
Title : Investigation of Internal Structure of the Nucleus with the aid of Mesons and Electrons

Orig Pub : Chem. szkole, 1955, 1, No 5, 4-14

Abstract : See Ref. Zh. Fiz., 1955, 18528

Card : 1/1

ALIKHANIAN,A.I.,; VAYSENBERG,A.O., kandidat fiziko-matematicheskikh nauk

Elementary particles. Tekh. mol. 23 no.5:10-14 My '55. (MLRA 8:6)

1. Chlen-korrespondent Akademii nauk SSSR (for Alikhanian).
(Particles, Elementary) (Nuclear forces)

BAKLAYEV, Ya.P.; OVCHINNIKOV, L.N., prof., doktor geol.-min.nauk, otv. red.; VAYSBERG, S.I., red.; IZMODENOVA, L.A., tekhn.red.

[Geology and potential of the Tur'insk contact-metasomatic deposits of copper in the northern Urals] Geologicheskoe stronie i perspektivy Tur'inskikh kontaktovo-metasomaticheskikh mestorozhdenii medi na severnom Urale. Sverdlovsk, 1959. 141 p. (Akademiia nauk SSSR. Ural'skii filial, Sverdlovsk. Gorno-geologicheskii institut. Trudy, no.37) (MIRA 13:2)
(Tur'insk region--geology)

S/076/63/037/002/006/018
B101/B186

AUTHORS: Vaysberg, S. E., Varshavskiy, Ya. M. (Moscow)

TITLE: Investigation of the two-temperature exchange of deuterium in the system water - hydrogen chloride

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 307-309

TEXT: It was sought to determine efficiency of two-temperature columns, which is important for the concentration of deuterium, and to compare it with that of rectification. For this purpose, di-temperature isotopic separation of hydrogen was effected in counter-current columns in the system hydrochloric acid - gas-vapor mixture of hydrogen chloride and water. The deuterium content of the water was 0.65 at%, that of the hydrochloric acid 0.61 at%. Results: The two-component state of the phases may lead to a shift in the enrichment peak to beyond the current ratio λ, equal to the partition factor α of deuterium. Maximum enrichment in the given system at column temperatures of t = 17°C and t' = 90°C corresponded to λ = 2.7-2.9, whereas $\alpha_{17^\circ C}$ = 2.53. The ratio φ between the HET on rectification of water and the HET on di-temperature isotopic exchange has

Card 1/2

been found equal to 0.4. There are 1 figure and 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
(Physicochemical Institute imeni L. Ya. Karpov)

SUBMITTED: August 17, 1961

Card 2/2

BICHKOVA, K.I. [Bychkova, K.I.], kand.med.nauk; VAYSBERG, S.Ya. [Vaisberh, S.IA.], kand.med.nauk

Functional changes under the influence of antiallergic actions in hemorrhagic syndromes in children. Ped., akush. i gin. 23 no.6: 33. '61. (MIRA 15:4)

1. Kafedra pediatrii Donetskogo meditsinskogo instituta.
(HEMOPHILIA)

L 13632-65 FBD/FSF(h)/EWT(l)/EWG(v)/EEC-4/EEC(t) Pe-5/Pae-2/Pi-4
SSD/ESD/AFWL/ASD(a)-5/AFETR/RAEM(a)/ESD(dp)/ESD(gs)/ESD(t) GW/WS

ACCESSION NR: AP5000611 S/0021/64/000/011/1464/1468

AUTHOR: Bazelyan, L. L.; Braude, S. Ya. (Corresponding member AN UkrSSR); Vaysberg, V. V.; Krymkin, V. V.; Men', A. V.; Sodin, L. G.

TITLE: Radio emission spectral density of some discrete sources at frequencies of 20—40 Mc

SOURCE: AN UkrRSR. Dopovidi, no. 11, 1964, 1464-1468

TOPIC TAGS: radio astronomy, radio telescope, radio emission

ABSTRACT: Radiation densities of eight discrete sources of cosmic radiation in the 20—40-Mc band were measured with a wide-band radio telescope. The measurements were carried out from October 1963 through February 1964. The radio telescope consisted of two electrically controlled multielement antenna arrays (each with 128 radiators) spaced 470 m apart along an E-W line. The antennas formed the elements of a T-shaped interferometer system. The width of the radiation pattern of each antenna was 4.6° at 20 Mc and 2.3° at 40 Mc; the interference interval at these frequencies was 1.8° and 0.9°, respectively. Phase-modulated radiometers (i-f bandwidths, 10—15 kc) were used for

Card 1/2